



Moyvannan Electricity Substation

Environmental Impact Assessment Report

Annex 5.5: County Development Plan Extract

Energia Renewables ROI Limited

Galetech Energy Services

Clondargan, Stradone, Co. Cavan Ireland

Telephone +353 (0)49 555 5050

www.galetechenergyservices.com





Roscommon County Development Plan 2022-2028

Volume I:

Roscommon County Development Plan 2022-2028

Your County

Your Plan

Your Future



Comhairle Contae
Ros Comáin
Roscommon
County Council



Natural Heritage

CHAPTER 10





10 Natural Heritage

10.1 Introduction

County Roscommon supports a wide range of natural heritage and biodiversity of local and national importance. A wide range of economic and social benefits and services result from the protection of environmental quality and biodiversity.

Biodiversity forms the basis of our landscapes and amenity areas and it is important because all of life depends on it for survival and humans in particular rely on it for food, clean air and water, as well as for places to relax in. It is therefore important to protect the wealth of wildlife and habitats i.e. the

biodiversity, in County Roscommon because we are dependent on these for our survival and wellbeing. The landscape created by biodiversity is a unique cultural resource contributing to our sense of place and to the local distinctiveness of each part of the county. It also contributes to our quality of life.

10.2 Biodiversity

Biodiversity refers to Biological Diversity - the variety of life on earth.

This includes all life forms - plants, animals and the habitats of which they are part. It varies from the largest animal to the smallest microorganism. It also includes crops and humans. It is the relationship within species, between species and the relationship with their environment.

Biodiversity sustains all living things, providing us with food, medicines, fuels and building materials. The processes of biodiversity help to provide the planet with fresh air, clean water, pollination of crops, fertility of soil and control of pests and diseases.

Developments which are inappropriately located or designed have the potential to have a negative impact on our biodiversity. Negative impacts can be minimised when local biodiversity is taken into consideration both at plan level and project design. It is important to recognise that biodiversity has the potential to enhance a development setting rather than posing an obstacle to development.

The County Roscommon Heritage Forum has produced several publications on the biodiversity, nature and wildlife of the county and they are available at www.roscommoncoco.ie.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.1

Ensure the protection, conservation and enhancement of the biodiversity of the county.

NH 10.2

Support the implementation of the relevant recommendations contained in the National Biodiversity Action Plan, including no net loss in biodiversity, and the All Ireland Pollinator Plan.

NH 10.3

Implement the County Roscommon Heritage Plan and the Biodiversity Action Plan, or any subsequent plans, in partnership with all relevant stakeholders.

NH 10.4

Proposals where woodland, tree or hedgerow removal is proposed will be required to demonstrate a sufficient level of protection to Annex IV species, such as Bats and Otter, in accordance with the Habitats Directive.

NH 10.5

Ecological Impact Assessment (EclA) will be required for proposed developments likely to significantly impact on natural habitats and/or species, and which are not subject to Environmental Impact Assessment

NH 10.6

Require all new developments in the early pre-planning stage of the planning process to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes, bat roost sites, green roofs, etc.) having regard to the recommendations outlined in the *Habitat Mapping in Co. Roscommon, 2011* and the *County Roscommon Swift Survey, 2020*

10.3 Natura 2000 Sites

The EU Habitats Directive (92/43/EEC) and EU Birds Directive (2009/147/EC) provide for the conservation and protection and, in some cases, restoration of habitats and species (plants and animals) that are of European importance.

Such sites form part of an EU network of ecologically important and protected sites known as the Natura 2000 network and comprise:

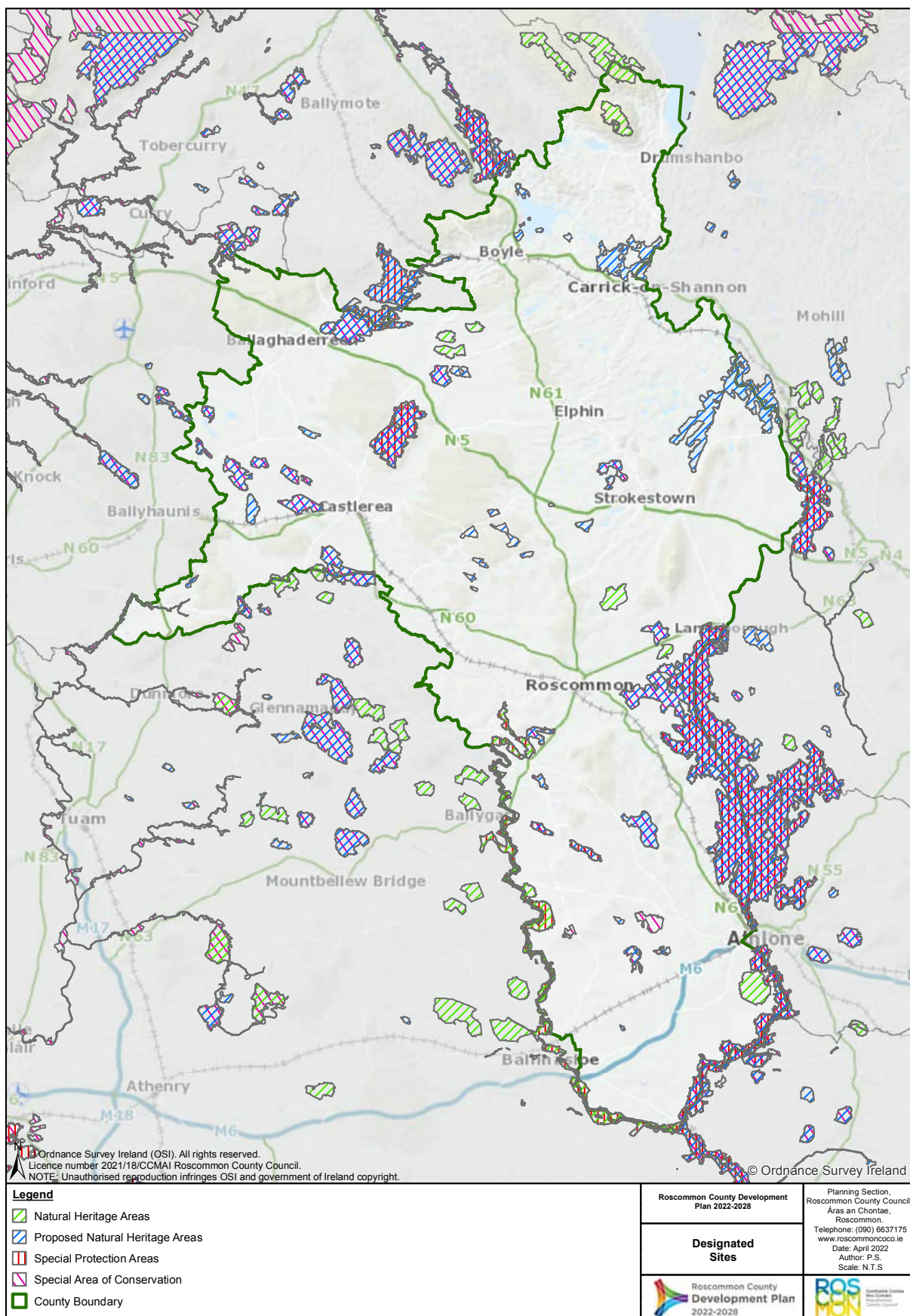
Special Areas of Conservation (SACs) - These sites are designated for the conservation and protection of plants, animals (other than birds) and wildlife habitats that are of importance to the EU. The sites are designated for habitats and species listed in Annex I and Annex II of the EU Habitats Directive (1992) respectively.

Special Protection Area (SPAs) – These sites are designated for the conservation and protection of birds and their habitats designated under the EU Birds Directive 2009 (first adopted by Member States in 1979), which was implemented

in Ireland through the Conservation of Wild Birds Regulations (Statutory Instrument 291 of 1985). These sites are for the protection and conservation of rare and threatened bird species and their habitats.

There are a total of 38 Natura 2000 sites in County Roscommon, as detailed on Map 10.1 (Designated Sites). The boundaries of protected areas may change and/or new sites may be proposed for designation during the lifetime of this Plan. Up- to-date information on boundaries, and details, of designated sites is available on the National Parks and Wildlife Service website (www.npws.ie).

Map 10.1: Designated Sites



10.4 Appropriate Assessment

It is necessary to consider the nature conservation implications of any plan or project on the Natura 2000 site network using a process known as Appropriate Assessment.

In accordance with the Birds and Habitats Regulations 2011, any plan or project which is not directly connected with or necessary to the management of a European site, must be screened for Appropriate Assessment to establish if there is potential for significant effects on a European site and to determine if an Appropriate Assessment is required. In respect of planning applications, it is the responsibility of Roscommon County Council as the competent authority to carry out an Appropriate Assessment of the application to assess the effects on Natura 2000 sites.

Following a finding that a proposed development will adversely affect the integrity of a Natura 2000 site, the plan or project can only proceed if there are imperative reasons of overriding public interest (IROPI), including those of a social or economic nature in line with Article 6(4) of the Habitats Directive.



NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.7

Implement Article 6(3) and where necessary Article 6(4) of the Habitats Directive and to ensure that Appropriate Assessment is carried out in relation to works, plans and projects likely to impact on European sites (SACs and SPAs), whether directly or indirectly or in combination with any other plan(s) or project(s). All assessments must be in compliance with the European Communities (Birds and Natural Habitats) Regulations 2011.

NH 10.8

Ensure that no plans, programmes, etc. or projects are permitted that give rise to significant cumulative, direct, indirect or secondary impacts on the integrity of European Sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects, (either individually or in combination with other plans, programmes, etc. or projects).

NH 10.9

Ensure that any plan or project that could have a significant adverse impact (either alone or in combination with other plans and projects) upon the conservation objectives of any Natura 2000 Site or would result in the deterioration of any habitat or any species reliant on that habitat will not be permitted unless in exceptional circumstances.

10.5 Natural Heritage Areas

The Wildlife (Amendment) Act 2000 provides for the designation and conservation of Natural Heritage Areas (NHAs).

NHAs are sites that support elements of our natural heritage which are unique, or of outstanding importance at the national level. Any development in, near or adversely affecting a Natural Heritage Area should avoid any significant adverse impact on the features for which the site has been designated.

There are currently eleven Natural Heritage Areas in County Roscommon. There are many more proposed NHAs in County Roscommon which will be designated on a phased basis.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.10

Actively promote the conservation and protection of areas designated as an NHA (including proposed sites) and to only consider proposals for development within or affecting an NHA where it can be clearly demonstrated that the proposed development will not have a significant adverse effect on the NHA or pNHA.

10.6 Geological Heritage

County Roscommon is a geologically diverse place. The bedrock foundation, with hundreds of millions of years in its formation and shaping, and the more recent history of geomorphological processes such as limestone solution and scouring by glaciers, are what has created that underlying geodiversity.

Geological understanding and interpretation is best done on the ground at sites where the rocks and landforms are displayed. County Roscommon has a wealth of such natural and human-influenced sites, particularly of karstic and glacial types.

An Audit of County Geological Sites in Roscommon, part funded by the Heritage Council, was carried out in 2012 in conjunction with the Irish Geological Heritage Programme of the Geological Survey of Ireland (GSI). It identified twenty-nine County Geological Sites which are currently understood to be the most important geological sites within Roscommon. Many of these sites are considered to be of national importance as best representative examples of particular geological formations or features. Many of these sites fall within existing pNHAs and SACs where the ecological interest is founded upon the underlying geodiversity.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.11

Preserve and protect sites of county geological importance from inappropriate development where they comprise designated sites or national heritage areas;

NH 10.12

Promote and facilitate the development of geo-tourism in County Roscommon where it does not have a detrimental impact on designated sites or features of geological interest.



Table 10.1: County Geological Sites

County Geological Site	Geological Interest
Brierfield Turlough	Turlough
Castleplunkett Turlough	Turlough
Carrowmurragh Mushroom Rocks	Mushroom Rocks
Killeglan Karst Landscape	Unmodified glacial boulder ridges now as karst landscape
Lough Funshinagh	Disappearing lake that intermittently drains away
Loughnaneane Turlough	Turlough
Mewlaghmore Dolines	Large doline field
Moyvannan Mushroom Rocks	Mushroom Rocks
Mullygollan Turlough	Turlough
Oweynagat	Relict Cave
Pollnagran	Active Stream Cave
Rockingham Spring	Large karstic spring
Ballinasloe-Split Hills-Clonmacnoise-Clara Esker System	Long, sinuous esker ridge system 70 kilometres across the Central Midlands
Boyle Drumlins	Discrete drumlin field of approx 200 drumlins
McKeon's Pit	Gravel pit in glacial fan
Mid Roscommon Ribbed Moraines	Ribbed moraine field with superimposed drumlins
Castlesampson Esker	Esker
Cloonburren Fan	Glacial fan
Errit and Cloonagh Loughs Deltas	Glacial deltas
Garranlahan Esker	Esker
Castlemine Quarry	Limestone quarry
Keeloges Quarry	Limestone quarry
Largan Quarry	Limestone quarry
Boyle Road Cutting	Road cutting in Devonian rocks
Lecarrow Clay Pit	Possible Tertiary clay deposit in a karstic solution pipe.
River Shannon Callows	River floodplain
Suck River Callows	River floodplain
Altagowlan	Disused coal mines and ancillary surface infrastructure, stone quarries
Arigna Mining Experience	Disused Coal Mines and visitor centre

10.7 Woodlands, Trees and Hedgerows

Trees and woodlands contribute to the landscape and visual amenity of County Roscommon. Native trees are particularly valuable as a habitat for invertebrates and bird life and trees provide a carbon sink and contribute to clean air and quality of life.



They also provide a valuable source of shelter and act as a buffer from noise. Woodland sites, such as St. John's Wood near Lecarrow are of national importance. Many other woodlands survive around the county, especially in demesnes and estates, such as at Rockingham near Boyle, Kilonan Castle near Keadue, Strokestown Park, and at Mote Park near Roscommon.

Hedges are a valuable asset to the county, they add much to the scenic appearance of the landscape and provide many services on the farm. The root systems of hedgerow trees and shrubs regulate water movement in the land and improve the quality of water. Hedgerows are also enormously important for wildlife. They are a habitat for insects like butterflies and bumblebees and provide food, shelter, and nesting sites for birds, from small songbirds to larger birds of prey like the Kestrel and Sparrowhawk. Mammals such as wood mice, hedgehogs, badgers, and bats also depend on hedges for their survival. It is important that hedgerows be retained where possible, especially townland boundary, roadside hedges and hedgerows linking other habitats, forming a wildlife corridor. However, proper care and maintenance of hedgerows is also important. Site clearance is often carried out when a new dwelling is about to be constructed and natural features such as trees and hedgerows are regularly cleared without considering the potential of these features.

The Habitats Directive provides a level of protection to Annex IV species, such as Bats and Otter. Proposed developments, including all proposals where woodland, tree or hedgerow removal is proposed, should be consistent with this.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.13

Encourage the retention of hedgerows and other distinctive boundary treatments in rural areas and prevent loss and fragmentation, where practically possible. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, mitigation by provision of the same type of boundary will be required.

NH 10.14

Promote and encourage planting of native hedgerow species in new developments.

NH 10.15

Ensure that hedgerows that are required to be removed in the interests of traffic safety or where breaches to hedgerows occur in compliance with relevant legislation, are replaced by the applicant/developer with suitable native species to the satisfaction of the Council.

10.8 Peatlands

Peatlands or bogs, as they are more commonly known, are a distinctive feature of the County Roscommon landscape.



Bogs are a unique wetland habitat, rich in wildlife possessing a combination of plants and animals that have evolved specially to thrive in a bog. Bogs can also be considered a living history book, containing within them semi-fossilized plant remains and human artefacts, such as stumps of bog pine from trees that grew about 4000 years ago and 'toghers' or ancient wooden roadways which were built from the Bronze Age up to the medieval, from c. 2000 BC up to c. 1500 AD before the bog grew over and concealed them. Bogs are also important controllers of water levels in river catchments, providing a source of water in dry conditions and soaking up excess water during wetter periods.

Developments sited on peatlands have the potential to increase overall carbon losses, potentially undermining expected carbon savings (in the case of renewable energy developments) and damaging rare habitats of European importance. It is recommended that when developing project proposals for developments on peatlands, assessments are undertaken that consider peatland stability, carbon emissions balance and hydrology and ecology.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.16

Protect and enhance the valuable peatland resource in County Roscommon whilst protecting the heritage and environmental value of these peatland areas. The aims of the National Peatlands Strategy and the implementation of the *National Raised Bog Special Areas of Conservation Management Plan 2017-2022* and the Enhanced Decommissioning Rehabilitation and Restoration Scheme will be supported.

NH 10.17

Work with relevant agencies such as the Bord na Mona, NPWS, Coillte and adjacent local authorities to prepare an after-use framework plan for the peatlands and related infrastructure, to provide for the future sustainable and environmentally sensitive use of large industrial peatlands sites when peat harvesting finishes.

10.9 Wetlands

Wetlands range from ponds to rivers, reed beds to bogs and fens to turloughs and are home to a large diversity of plants and animals.

They support a variety of habitats and species, function in the protection of water quality and/or flood control, are important carbon stores contributing to climate resilience and provide open space and recreational opportunities. However, wetlands have another importance – drainage; much of the surface water, which remains on land in Ireland is stored in wetlands. However, wetlands, including fens, are under increasing threat from drainage, reclamation and development.

A survey of wetland sites undertaken in 2017 identified the area of wetland sites in Roscommon covering 580 km² (21.9% of land area).

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.18

Manage, enhance and protect the wetlands of the county having regard to the *County Roscommon Wetland Survey* (2017) and ensure that there is an appropriate level of assessment in relation to proposals which would involve draining, reclaiming or infilling of wetland habitats. The Council shall be available to engage with the NPWS with the objective of facilitating the monitoring and surveying of wetland sites in Roscommon.



10.10 Inland Waterways

There are eight inland waterways in County Roscommon, all of which are connected to the Shannon Navigation.

Table 10.2: Inland Waterways

River Shannon
Boyle River
Boyle Canal
Jamestown Canal
Carnadoe Waters
River Suck
Lough Allen
Lecarrow Canal

These waterways have a rich built, natural and cultural heritage. The bridges, locks, lock keeper's cottages, harbours and navigation markers found along the inland waterways represent skills and workmanship dating from the 1700's to the present day. Inland waterways provide a valuable habitat for many diverse species of flora and fauna.

Nowadays, inland waterways have an economic value, in terms of tourism attractions with potential to generate revenue. They also have a quality of life value, valuable to locals and visitors alike. They provide access to places where people can walk along towpaths and enjoy the surroundings of the waterside.

The Council shall be available to engage with the NPWS with the objective of facilitating the monitoring and surveying of wetland sites in Roscommon.³³

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.19

Ensure that the county's watercourses are retained for their biodiversity and flood protection values and to conserve and enhance where possible, the wildlife habitats of the County's rivers and riparian zones, lakes, canals and streams which occur outside of designated areas to provide a network of habitats and biodiversity corridors throughout the county. The Council shall be available to engage with the NPWS with the objective of facilitating the monitoring and surveying of wetland sites in Roscommon.

NH 10.20

Protect waterbodies and watercourses from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. To this effect, consideration should be given to Inland Fisheries Ireland's guidance document *Planning for Watercourses in the Urban Environment* (2020).

NH 10.21

Support the sustainable development of the fisheries and aquaculture industry in co-operation with the Department of Agriculture, Food and the Marine and the Inland Fisheries Ireland.

³³ Consideration should be given to Inland Fisheries Ireland's guidance document "Planning for watercourses in the urban environment" (2020).

10.11 Urban Habitats

Urban settlements are often located near biodiversity hotspots, such as rivers, wetlands and flood plains. In urban areas, artificial habitats such as parks and water features also support wildlife, and this can be enhanced through improved wildlife-friendly management.

Private gardens also encourage wildlife and buildings can be designed to incorporate biodiversity with features, such as green roofs, and they can play an important role in supporting biodiversity in urban areas. They provide important habitats and wildlife corridors and enhance both the public realm and quality of life in urban areas.



NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.22

Encourage and enhance, where appropriate, the provision of biodiversity features in urban areas through the preparation of local area plans/settlement plans, green infrastructure strategies and through the development management process.

10.12 Alien Invasive Species

Invasive species are species that have been introduced, generally by human intervention, outside their natural range and whose establishment and spread can threaten native ecosystem structure, function and delivery of services.

There is potential for the spread of non-native invasive species during excavation and construction works and for such species to be introduced into the environment via spreading from private gardens, boat users, aquaculture, horticulture etc. The risk of accidental transfer of the non-native invasive species requires adherence to current best practice protocol for avoiding the spread or transfer of all invasive animals and plants.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.23

Require all development proposals to address the presence or absence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and submit an Invasive Species Management Plan where such a species exists to comply with the provisions of the European Union (Birds and Natural Habitats) Regulations 2011 to 2015.

NH 10.24

Ensure, where the presence of invasive species is identified on any proposed development site, that robust treatment measures are detailed to demonstrate how these species will be appropriately managed and controlled.

10.13 Landscape Character

In considering the character of the landscape when preparing the Plan, a *Landscape Character Assessment* has been prepared and accompanies the Plan.

Within it, Landscape Character Types or distinct landscapes that exist within the county are identified. These are then grouped or identified as Landscape Character Areas. A Landscape Value is then assigned to the landscape character areas.

The landscape values presented in the *Landscape Character Assessment* classifies each of the landscape character areas into one of the following four classes: Exceptional Value, Very High Value, High Value and Moderate Value. Two landscapes in the county are classified as Exceptional Value, namely the Tusk and Rathcroghan Plateau in the centre of the county and the Lough Key and Boyle River Network in the northeast of the county.

PROTECTED VIEWS AND SCENIC ROUTES

The landscape of the county has many vantage points which offer attractive views. These scenic views are of an amenity and tourism value and contribute to our quality of life. It is not envisaged that the designation of a protected view would prohibit all development within the view, but any development proposed within the view is required to be designed and located so as not to obstruct the view or be unduly intrusive in the landscape as seen from these vantage points.

Maps identifying the location of protected views and designated scenic routes are contained in the *Landscape Character Assessment* which accompanies the Plan.

NATURAL HERITAGE POLICY OBJECTIVES

It is a policy objective of Roscommon County Council to:

NH 10.25

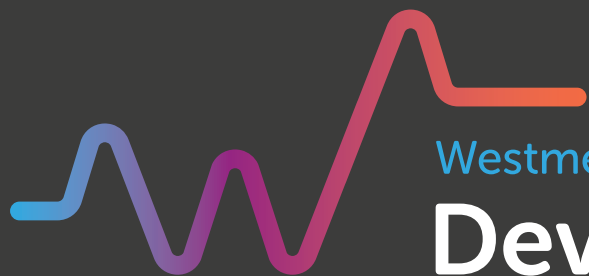
Minimise visual impacts on areas categorised within the County *Roscommon Landscape Character Assessment* including “moderate value”, “high value”, “very high value” and with special emphasis on areas classified as “exceptional value” and where deemed necessary, require the use of Visual Impact Assessment where proposed development may have significant effect on such designated areas.

NH 10.26

Protect important views and prospects in the rural landscape and visual linkage between established landmarks, landscape features and views in urban areas.

NH 10.27

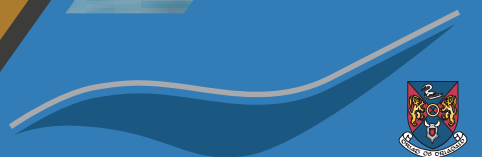
To co-ordinate with all adjoining Local Authorities in reviewing Landscape Character Assessments (LCAs) to ensure consistency in classification and policy in adjoining areas of similar character. A targeted review of the LCA shall be undertaken following the completion of the National Landscape Character Assessment, and any associated statutory Guidelines as well as the Regional Landscape Character Assessment to be completed by the Regional Assembly.



Westmeath County

Development Plan

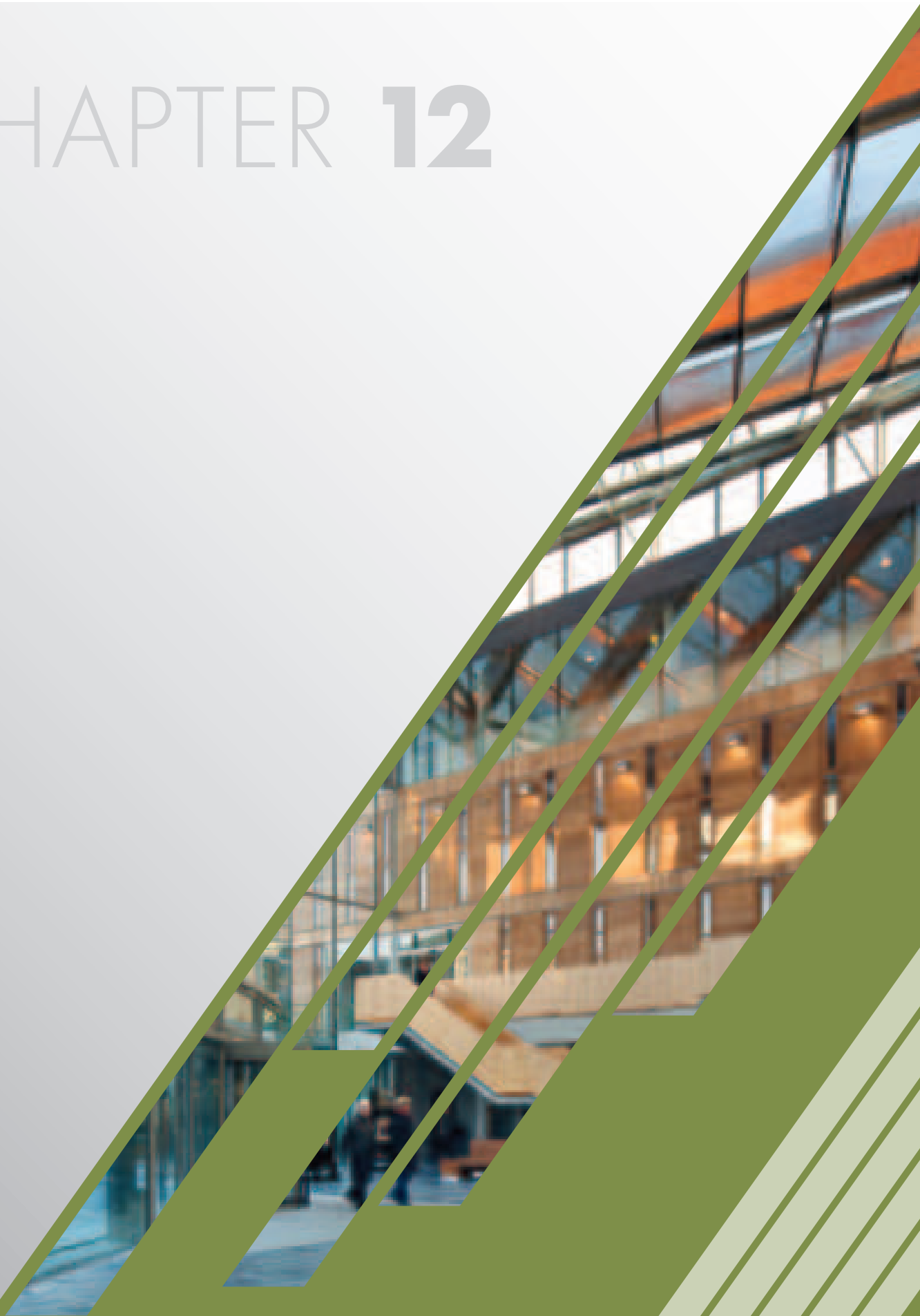
2021 - 2027



WESTMEATH COUNTY COUNCIL
Comhairle Chontae na hIarmhí

VOLUME 1
Written Statement

CHAPTER 12



CHAPTER 12

Natural Heritage and Green Infrastructure

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12.1 Aim

Continue to protect and enhance the County's natural heritage and biodiversity and ensure that networks of green infrastructure are identified, created, protected and enhanced to provide a wide range of environmental, social and economic benefits to communities.

12.2 Natural Heritage and Green Infrastructure

Westmeath supports a wide range of habitat types and landscapes including peatlands, lakes, canals, woodlands, wetlands, grasslands, eskers and hedgerows. Natural heritage and biodiversity are integral to the image of Westmeath and contribute to the well-being and quality of life of those living in and visiting the County. It is recognised that green infrastructure is an innovative approach to the maintenance and preservation of biodiversity and ecosystem services in the wider landscape. The plan supports the development of green infrastructure networks in order to protect the county's rich and varied natural heritage.

12.3 Natural Heritage Policy Framework

This Plan sets out to contribute towards the protection of designated ecological sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), Ramsar Sites, Flora Protection Order Sites, Wildlife Sites (including Nature Reserves), certain entries to the Water Framework Directive Register of Protected Areas, Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs), Wildfowl Sanctuaries (see S.I. 192 of 1979) and Tree Preservation Orders (TPOs). Contribute towards compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents:

- EU Directives, including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Liability Directive (2004/35/EC), the Environmental Impact Assessment Directive (2011/92/EU, as amended by 2014/52/EC), the Water Framework Directive (2000/60/EC) and the Strategic Environmental Assessment Directive (2001/42/EC).
- National legislation, including the Wildlife Acts 1976 and 2010 (as amended), the Planning and Development Act 2000 (as amended) and associated Regulations, Environmental Impact Assessment Regulations, the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), the European Communities (Environmental Liability) Regulations 2008 (as amended) and the Flora Protection Order 2015.
- National policy guidelines (including any clarifying Circulars or superseding versions of same), including the "Landscape and Landscape Assessment" Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessment Guidance 2010.
- Catchment and water resource management plans, including the relevant River Basin Management Plan and Flood Risk Management Plan (including any superseding versions of same).

- Biodiversity Plans and guidelines, including the 3rd National Biodiversity Plan 2017-2023 (including any superseding version of same).
- Ireland's Environment 2016 - An Assessment (EPA 2016), including any superseding versions of same), and to make provision where appropriate to address the report's goals and challenges.

12.4 Project Ireland 2040 - National Planning Framework (NPF)

The National Planning Framework (NPF) aims to protect and value our important and vulnerable habitats, landscapes, natural heritage and green spaces. It highlights the importance of the interrelationships between biodiversity, natural heritage, landscape and our green spaces. The NPF states that integrated planning for green infrastructure and ecosystem services will be incorporated into the preparation of statutory land use plans. It also refers to the importance of biodiversity and how the planning system will be responsive to our national environmental challenges and ensure that development occurs within environmental limits having regard to the requirements of all relevant environmental legislation.

12.5 Eastern and Midlands Regional Assembly: Regional Spatial and Economic Strategy

The Strategy sets out 16 Regional Strategic Outcomes (RSOs) which are aligned with international, EU and national policy and set the framework for City and County Development Plans. One of these outcomes specifically refers to enhanced green infrastructure with an objective to identify, protect and enhance green infrastructure and ecosystem services in the region and promote the sustainable management of strategic natural assets such as our farmlands, peatlands, uplands woodlands and wetlands.

The Strategy recognises the need to conserve and enhance the biodiversity of our protected habitats and species including landscape and heritage protection, to identify, protect and enhance our green infrastructure, to ensure the sustainable management of our natural resources, to build climate resilience, to support the transition to a low carbon economy by 2050 and the protection of the healthy natural environment to ensure clean air and water for all.

It supports the development and delivery of sustainable strategic greenways, blueways and peatways, the future development of national and regional greenways and promotes co-ordinated spatial planning to conserve and enhance the biodiversity of protected habitats and species including landscape and heritage protection.

It also recognises that green infrastructure serves a wide variety of important functions including but not limited to provision of habitat, increased biodiversity, ecological corridors, climate change adaptation and mitigation, water treatment, water retention, local amenity provision, air quality improvement and cultural and heritage preservation.

The Eastern and Midlands Regional Assembly Regional Spatial and Economic Strategy (RSES) further advocates the development of a green infrastructure approach at all levels in the planning system and specifically as part of the preparation of Green Infrastructure Strategies at County/City level.

The following RPO's are of particular relevance:

Regional Policy Objective 4.64

Support Mullingar's role as a tourism hub having regard to its accessibility to key tourist destinations in the region including proximity to natural amenities and recreational opportunities including the Galway to Dublin Greenway.

Regional Policy Objective 6.7

Support local authorities to develop sustainable and economically efficient rural economies through initiatives to enhance sectors such as agricultural and food, forestry, fishing and aquaculture, energy and extractive industries, the bio-economy, tourism, and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage.

Regional Policy Objective 7.19

Support the consideration of designating a National Park for the peatlands area in the Midlands.

Regional Policy Objective 7.22

Local authority development plan and local area plans, shall identify, protect, enhance, provide and manage green infrastructure in an integrated and coherent manner and should also have regard to the required targets in relation to the conservation of European Sites, other nature conservation sites, ecological networks, and protected species.

Regional Policy Objective 7.23

Support the further development of Green Infrastructure policies and coordinate the mapping of strategic green infrastructure in the region.

Regional Policy Objective 7.24

Promote the development of a sustainable strategic greenway network of national and regional routes, with a number of high capacity flagship routes that can be extended and/or linked with local greenways and other cycling and walking infrastructure, notwithstanding that capacity of a greenway is limited to what is ecologically sustainable.

Regional Policy Objective 7.25

Support local authorities and state agencies in the delivery of sustainable strategic greenways, blueways and peatways projects in the region under the Strategy for the Future Development of National and Regional Greenways.

Regional Policy Objective 7.26

Support the development of guidance for assessment of proposed land zonings in order to achieve appropriate riparian setback distances that support the attainment of high ecological status for waterbodies, the conservation of biodiversity and good ecosystem health, and buffer zones from flood plains.

12.6 Westmeath Biodiversity Action Plan 2014-2020

The Biodiversity Action Plan sets out a vision for the conservation and sustainable management of natural heritage in Westmeath and to encourage community participation in its implementation. It provides a framework for conserving biodiversity and natural heritage at a local level and aims to conserve and enhance the biodiversity of County Westmeath by prioritising, coordinating and initiating actions to ensure effective conservation and enhancement in our county and raising awareness of biodiversity in partnership with local communities.

As part of the ongoing implementation of actions under the County Westmeath Biodiversity Plan 2014-2020, the Council has undertaken an audit of Geological heritage sites in Westmeath, carried out a County Swift Survey, prepared a Management Plan for County Council owned lands at Coolure Demesne and facilitated information sessions on management of biodiversity in graveyards.

Natural Heritage Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.1	Contribute as appropriate towards the protection of designated sites in compliance with relevant EU Directives and applicable national legislation.
CPO 12.2	Support the implementation of any relevant recommendations contained in the National Biodiversity Plan, the All Ireland Pollinator Plan and the National Peatlands Strategy.
CPO 12.3	Support the implementation of the Westmeath Biodiversity Action Plan 2014-2020 and any revisions made thereto.

12.7 Appropriate Assessment

The Habitats Directive requires that the impacts of any plans or projects likely to affect Natura 2000 sites are assessed by the Planning Authority. This process is known as Appropriate Assessment (AA). Appropriate Assessment means an assessment, based on best scientific knowledge, of the potential impacts of a plan or project, wherever located, on the conservation objectives of any Natura 2000 site and the development, where necessary, of mitigation or avoidance measures to preclude negative effects. The Natura 2000 network consists of Special Areas of Conservation (SAC) and candidate cSAC and Special Protection Areas (SPA) and candidate cSPA both within the county and within a 15km radius of same. It is Council policy that all development proposals relating to Natura 2000 sites will comply with the DoECLG publication “Appropriate Assessment of Plans and Projects in Ireland- Guidance for Planning Authorities”

All projects and plans arising will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the Council has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and subsequent Appropriate Assessment where necessary that:

1. The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European Site (either individually or in combination with other plans or projects) or
2. The plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000 or
3. The plan or project will have a significant adverse effect on the integrity of any European Site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.

Following a finding that a proposed development will adversely affect the integrity of a Natura 2000 site, planning permission may only be granted in exceptional cases, in the absence of any alternatives, for Imperative Reasons of Overriding Public Interest (IROPI) subject to the strict requirements of Article 6(4) of the Habitats Directive.

12.8 Natura 2000 sites

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are being or have been, designated to conserve habitats and species of European importance pursuant to the EU Habitats and Birds Directives respectively. Collectively these designated areas are referred to as Natura 2000 sites. Special Areas of Conservation (SACs) are designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC). The National Parks and Wildlife Service website provides up-to-date information regarding these sites (www.npws.ie).

These sites are part of a pan-European network known as Natura 2000 internationally and nationally designated sites hosting habitats listed in Annex I of the Habitats Directive and sites hosting rare and protected species and their habitats. The boundaries of the protected areas may change during the lifetime of the Plan and additional areas may be designated.

Many wetland SACs and SPAs of international importance in Ireland are also listed as Ramsar Sites, which comprise of important wetland areas. There are 5 Ramsar Sites in Westmeath listed in Table 12.2. Many other wetlands occur outside of designated sites and are ecologically important due to the habitats they support.

Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European Sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives and management plans may be considered after this is done.

The Council has prepared a Habitat Management Plan for Council owned lands along Lough Ennell at Belvedere, Lilliput, Tudenham, Butler's Bridge and Ladestown. It is the intention to continue this established practice of preparing habitat management plans for Council owned lands at other lakes in the County, in consultation with the NPWS, thus ensuring that such plans are fully integrated with the NPWS Plan and other plans and programmes, and that they are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.

Natura 2000 Sites Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.4	Protect and conserve Special Areas of Conservation, candidate Special Areas of Conservation, Special Protection Areas and candidate Special Protection Areas, designated under the EU Birds and Habitats Directives respectively.
CPO 12.5	Ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European Sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation,

	<p>decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects).</p> <p><i>Footnote:</i> Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be a) no alternative solution available, b) imperative reasons of overriding public interest for the project to proceed; and c) Adequate compensatory measures in place.</p>
CPO 12.6	<p>Ensure that any plan or project that could have a significant adverse impact (either by themselves or in combination with other plans and projects) upon the conservation objectives of any Natura 2000 Site or would result in the deterioration of any habitat or any species reliant on that habitat will not be permitted.</p> <p><i>Footnote:</i> Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be a) no alternative solution available, b) imperative reasons of overriding public interest for the project to proceed; and c) Adequate compensatory measures in place.</p>
CPO 12.7	<p>Assess any plan or project in accordance with Article 6 of the Habitats Directive to determine whether the plan or project is likely to have a significant effect on the site either individually or cumulatively upon the integrity, conservation objectives and qualifying interest of any Natura 2000 Site.</p>
CPO 12.8	<p>Require an ecological appraisal for development not directly connected with or necessary to the management of Natura Sites, or a proposed Natura Site and which are likely to have significant effects on that site either individually or cumulatively.</p>
CPO 12.9	<p>Identify and provide appropriate buffer zones between Designated Sites and local biodiversity features and areas zoned for development.</p>
CPO 12.10	<p>Prepare Strategic Habitat Management Plans for Natura 2000 Sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders.</p>
CPO 12.11	<p>Promote the maintenance and as appropriate, achievement of favourable conservation status of habitats and species and to improve the ecological coherence of the Natura 2000 network, by maintaining and where appropriate, developing features in the landscape which are of major importance for wild fauna and flora.</p>
CPO 12.12	<p>Require that new development proposals affecting designated sites have regard to the sensitivities identified in the SEA Environmental Report prepared in respect of this plan.</p>

12.9 Natural Heritage Areas (NHA)

Under the Wildlife (Amendment Act) 2000, Natural Heritage Areas (NHAs) are being designated to conserve flora, fauna, habitats and geological sites of national importance and are legally protected from damage from the date they are formally proposed for designation. Nature conservation is the primary objective and takes precedence over all other activities.

It was from these NHAs that the most important sites were selected for international designation as Special Protection Areas (SPAs) and Special Areas of Conservation (SACs).

The Council will normally only grant permission where it is clearly demonstrated that a proposal will have no significant adverse impact on the habitats and species of interest in the designated area and its ecological integrity.

A list of the existing SAC's, SPA's, NHA's and proposed NHA's in the county are outlined in the Table 12.1.

Table 12.1 List of the SAC/SPA/NHA/PNHA in County Westmeath

Description of Area	SAC	SPA	NHA	PNHA	Hectares
Lough Owel	✓	✓		✓	1122.08 (SAC) 1118.64 (SPA)
Lough Ree	✓	✓		✓	3820.68 (SAC) 3609.85 (SPA)
Lough Ennell	✓	✓		✓	1719.63 (SAC) 1397.66 (SPA)
Lough Lene	✓				490.74 (SAC)
Lough Derravaragh		✓	✓		1130.09 (SPA)
Lough Sheelin		✓		✓	323.71 (SPA)
Lough Kinale and Derragh Lough		✓	✓		28.92 (SPA) 40.17 (NHA)
Lough Bane	✓			✓	113.73 (Lough Bane and Lough Glass SAC)
Lough Glass	✓				113.73 (Lough Bane and Lough Glass SAC)
Lough Garr			✓		218.99 (NHA)
Lough Iron		✓		✓	933.35 (SPA)
Lough Glore				✓	
Lough Naneagh				✓	

Lough Shesk				✓	
Lough Sewdy				✓	
River Boyne and River Blackwater	✓	✓			337.60 (SAC) 23.95 (SPA)
River Shannon Callows	✓			✓	333.08 (SAC)
Middle Shannon Callows		✓			333.38 (SPA)
Glen Lough		✓		✓	57.84 (SPA)
White Lough, Ben Lough and Lough Doon	✓			✓	79.90 (SAC)
Ballymore Fen	✓				42.71 (SAC)
Split Hills and Long Hill Esker	✓			✓	75.23 (SAC)
Scragh Bog	✓			✓	23.93 (SAC)
Mount Hevey Bog	✓			✓	2545.31(SAC)
Carn Park Bog	✓			✓	247.15 (SAC)
Crosswood Bog	✓			✓	206.52 (SAC)
Moneybeg and Clareisland Bogs	✓				300.47 (SAC)
Garriskil Bog	✓	✓		✓	351.29 (SAC) 324.11 (SPA)
Derragh Bog	✓				37.62 (SAC)
Wooddown Bog	✓		✓		49.86 (SAC) 196.54 (NHA)
Milltownpass Bog			✓		118.40 (NHA)
Nure Bog			✓		225.36 (NHA)
Ballynagrenia and Ballinderry Bog			✓		287.38 (NHA)
Cloncrow Bog (New Forest)			✓		234.33 (NHA)
Clonydonnin Bog			✓		61.54 (NHA)
Hill of Mael and The Rock of Curry				✓	
Aghalasty Fen				✓	
Ballynafid Lake and Fen				✓	

Royal Canal				✓	
Lough Sheever Fen/Slevin's Complex				✓	
Walshestown Fen				✓	
Waterstown Lake				✓	
Ballynagarbry				✓	
Grand Canal				✓	
Ardan Wood				✓	
Rahugh Ridge (Kiltober Esker)				✓	
Murphy's Bridge Esker				✓	
Derrygolan Esker				✓	

Table 12.2 List of Ramsar Sites

Site Code	Site Name	Ha	Designation
847	Lough Derravaragh	1120	Ramsar
848	Lough Ennell	1404	Ramsar
849	Lough Glen	81	Ramsar
850	Lough Iron	182	Ramsar
851	Lough Owel	1032	Ramsar

12.10 Rare and Protected Species and their Habitats

The Council recognise that certain plant, animal and bird species are becoming threatened and rare. This includes nationally rare plants, plants listed in the Red Data Lists of Irish Plants, Flora Protection Order 2015 (or other such Orders) and their habitats, birds listed in Annex I of the Birds Directive, and animals and birds listed in the Wildlife (Amendment) Act 2000 and subsequent statutory instruments.

A list of rare and protected species and their associated legislation can be found on the following link: https://www.npws.ie/sites/default/files/general/Listed_species_checklist_Dec12.pdf

Many of these species are protected by law. Where Annex IV species are present, all possible measures to avoid damage and disturbance to them must be taken in the formulation of proposals for development. Annex IV species may occur outside of designated sites but still have strict legal protection.

Where the risk of damage or disturbance is unavoidable, an application for a derogation licence may be made to the Minister for Culture, Heritage, and the Gaeltacht under Regulation 54 or 55 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011). The derogation licence should be obtained in advance of seeking planning permission for a proposed development and must accompany an application for planning permission.

The planning process will seek to protect rare and threatened species, including species protected by law and their habitats. Applicants must demonstrate that proposals will not have a significant adverse impact on such species and their habitats. The Planning Authority will take account of the views of the Prescribed Bodies and any licensing requirements in relation to protected species.

An Ecological Impact Assessment will be required for any proposed development likely to have a significant impact on rare and threatened species including species protected by law and their habitats. The Council will normally only grant planning permission where it is clearly demonstrated that a proposal will have no significant adverse impact, incapable of satisfactory avoidance or mitigation, on the species of interest and associated habitat(s).

Rare and Protected Sites Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.13	Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset.
CPO 12.14	Require all new developments in the early pre-planning stage of the planning process to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.
CPO 12.15	Support the protection of all native woodlands listed in the National Survey of Native Woodlands 2003 to 2008.
CPO 12.16	Apply the precautionary principle in relation to development proposals in areas identified as being of national nature conservation interest, by requiring a Scientific/ Ecological Risk Assessment to ensure that the development will not impact on the integrity and habitat value of the site.
CPO 12.17	Support and cooperate with Statutory Authorities and other relevant bodies in support of measures taken to manage designated nature conservation sites, in order to achieve their conservation objectives. Specific regard shall be had to Conservation Management Plans and their conservation objectives/ management practices, where they exist.

CPO 12.18	Consult with the National Parks and Wildlife Service (NPWS) in regard to any developments (those requiring permission and those not requiring planning permission) which the Council proposes to carry out within pNHAs, NHAs, SACs, SPAs, and other important ecological sites.
CPO 12.19	Maintain the conservation value of Council owned land within NHAs and pNHAs and promote the conservation value of Council owned lands adjoining NHAs.
CPO 12.20	Protect and conserve NHAs and pNHAs including NHAs that become designated and notified to the Local Authority during the lifetime of the Plan and seek to develop linkages between designated sites, where feasible and as resources permit.
CPO 12.21	Lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane. Lighting fixtures should have minimum environmental impact and Dark Sky lighting should be considered in the interest of reducing the impact of lighting on wildlife as part of any future planning application, thereby contributing towards the protection of amenity and the protection of light sensitive species such as bats. EUROBATs guidelines should be applied in informing proposed development(s), where relevant.
CPO 12.22	Require, in special circumstances where protected species/habitats are identified in association with a development proposal, that an 'Ecological Impact Assessment (EclA)' prepared by a suitably qualified and indemnified person be undertaken for a proposed development which may potentially have a significant impact on rare and threatened species.

12.11 Local Sites of Biodiversity Value and Non-Designated Sites

There are many important wildlife habitats in County Westmeath that do not meet the criteria for designations as an NHA, but are important on a county or local basis, as they act as stepping stones in a wider ecological network.

These include rivers and river banks, ponds, small woods and hedgerows which are essential to the migration, dispersal and genetic exchange of wild species. Article 10 of the Habitats Directive states that Member States shall endeavour in their land use planning and development policies, to encourage the management of features of the landscape which are of major importance for wild flora and fauna. In order to inform this process, the Council commissioned surveys of key habitats in the County namely geology sites, peatlands, and wetlands.

Sites of Biodiversity Value and Non-designated Sites Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.23	Seek to create and enhance ecological linkages and buffer zones from development.
CPO 12.24	Protect and where possible enhance biodiversity and ecological connectivity, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and geo-morphological systems, other landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive. Appropriate mitigation and/or compensation to conserve biodiversity, landscape character and green infrastructure networks will be required where habitats are at risk or lost as part of a development.
CPO 12.25	Recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve the biological diversity.
CPO 12.26	Investigate a protocol in relation to the application of an ecosystem services scoring approach to inform the assessment of planning applications.

12.12 Invasive Species

The spread of invasive species is a growing problem. Many non-native invasive species of flora and fauna have an impact on biodiversity and pose a threat to native vegetation and wildlife by destroying their habitats or introducing new diseases or parasites. They can also result in significant damage to economic interests, such as agriculture, forestry and civil infrastructure.

Prohibitions are in place in relation to the introduction or dispersal of certain invasive species as set out in the Third Schedule of the European Communities (Birds and Habitats Regulations 2011 (S.I. 477/2011)).

Invasive Species Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.27	Prevent the spread of invasive species within the plan area, including requiring landowners and developers to adhere to best practice guidance in relation to the control of invasive species.
CPO 12.28	Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are

	or were previously present, the applicant will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).
CPO 12.29	Support, as appropriate, the National Parks and Wildlife Service's efforts to seek to control and manage the spread of non-native invasive species on land and water. Where the presence of non-native invasive species is identified at the site of any proposed development or where the proposed activity has an elevated risk of resulting in the presence of these species, details of how these species will be managed and controlled will be required.

12.13 Geology

Westmeath has an extensive and diverse range of geological heritage sites, many of which fall within existing pNHAs and SACs, where the ecological interest is founded upon the underlying geodiversity. Some of the oldest rocks in the county are marine sandstones around Sion Hill. However, most of the bedrock geology of Westmeath comprises of Carboniferous Limestone. Over time this limestone was exposed as land and subject to intense weathering leading to some karstic landscape features (underground drainage and isolated hills). Subsequent Ice Ages resulted in the formation of eskers i.e. linear ridges of sands and gravels that were deposited in meltwater tunnels under the ice sheets. The best spread of eskers in the country covers Westmeath and Offaly, with c.10% of County Westmeath covered by eskers or associated outwash deposits of sand and gravel. The end of the Ice Age led to the formation of mushroom rocks and turloughs.

Geomorphological features of note in the County include the Fore Hills, the South Westmeath hummocks, the Rahugh Esker and the Mount Temple Esker.

An audit of Geological Heritage sites in Westmeath confirmed 28 County Geological Sites (CGS) (* Meehan, R.; Hennessy, R., Parkes, M. and Gatley, S. (2019) *The Geological Heritage of County Westmeath - An Audit of County Geological Sites in County Westmeath*. Nine of these County Geological Sites are considered to be of national importance as a best representative example of particular geological formations or features and have been recommended for designation as Natural Heritage Areas (NHAs). A Geological Map of Westmeath is contained in Map 70, Volume 2.

Table 12.3 Westmeath County Geological Sites (after Meehan, Hennessy and Parkes 2018)

Site Name	Designation	IGH Primary	IGH Secondary	IGH Third	GIS Code
Ballycor Mushroom Rocks	County Geological Site	IGH1			WH001
Calliaghstown-Milltown Esker	County Geological Site	IGH7			WH002

Cappalahy Esker	County Geological Site	IGH7			WH003
Clonthead Mushroom Rock	County Geological Site	IGH1			WH004
Deerpark Quarry	County Geological Site	IGH8	IGH15		WH005
Dun na Si Amenity and Heritage Park	County Geological Site	IGH1	IGH7	IGH16	WH006
Finnea – Murrens Esker	County Geological Site	IGH7			WH007
Fore Hills	County Geological Site	IGH1	IGH7	IGH16	WH008
Hill of Uisneach	County Geological Site	IGH1	IGH7		WH009
Horseleap Esker	County Geological Site	IGH7			WH010
Kilbeggan Esker	County Geological Site	IGH7			WH011
Kilbeggan Racecourse Esker	County Geological Site	IGH7			WH012
Knockastia Hill and Quarry	County Geological Site	IGH8			WH013
Lough Derravaragh	County Geological Site	IGH7	IGH8	IGH14	WH014
Lough Bane and Lough Glass	County Geological Site	IGH7	IGH14		WH015
Lough Iron	County Geological Site	IGH1	IGH16		WH016
Loughandonning Muchroom Rock	County Geological Site	IGH1			WH017
Mount Temple Esker	County Geological Site	IGH7			WH018
Mullingar Bypass	County Geological Site	IGH8			WH019
Postnashangan Quarry	County Geological Site	IGH7			WH020
Rahugh Ridge	County Geological Site	IGH7			WH021
River Inny	County Geological Site	IGH8			WH022
Rock of Curry and Hill of Mael	County Geological Site	IGH12			WH023
South Westmeath hummocks	County Geological Site	IGH7			WH024
Split Hill and Long Hill Esker	County Geological Site	IGH7			WH025

Streamstown Esker	County Geological Site	IGH7			WH026
Tullin Mushroom Rock	County Geological Site	IGH1			WH027
Tyrrellspass Kettle Hole	County Geological Site	IGH7			WH028

Geological Heritage Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.30	Contribute towards the appropriate protection and maintenance of the character, integrity and conservation value of features or areas of geological interest listed in Table 12.3.
CPO 12.31	Support the implementation of recommendations made in the County Westmeath Geological Audit.
CPO 12.32	Consult with the Geological Survey of Ireland when undertaking, approving or authorising developments which are likely to impact on County Geological Sites or involve significant ground excavations.
CPO 12.33	Protect geological NHA's as they become designated during the lifetime of the Plan.
CPO 12.34	Encourage and promote, where appropriate, public access to geological and geomorphological sites and avoid inappropriate development through consultation with the Geological Survey of Ireland, subject to environmental and habitats assessment.
CPO 12.35	Favour the retention of new rock exposures created as a result of major new carriageways or in other major infrastructural work, where feasible and safe to do so.
CPO 12.36	Consider in consultation with the NPWS, Offaly County Council and the Geological Survey of Ireland the potential designation of the south Westmeath esker landscape as a UNESCO geo-park, to promote the unique geological heritage of the area.

12.14 Trees, Woodlands and Hedgerows

Trees, woodlands and hedgerows are an important natural and landscape asset in County Westmeath and provide a biodiversity function in the provision of food, habitat and shelter in exposed areas and function as pollution filters and carbon sinks. Hedgerows are important habitat and wildlife corridors for small mammals, birds and bat species.

Noteworthy woodlands in the County including Cavestown and Knockeyon Wood have been designated as Possible Ancient Woodland (Perrin, P.M. and Daly, O.H. 2010 Provisional Inventory of Ancient and Long-Established Woodland) and Ardan Wood, which is an existing mature broadleaf woodland, and is potentially also an Ancient Woodland site, with tentative clues that it was present during the time of the Down Survey (completed in 1658), potentially making it over 350 years old. The wood is a seven-acre horseshoe shaped site west of Tyrrellspass in Westmeath, and is in the main, a sloped site with varying aspect. It is currently believed the site is on the sides of a flat-topped drumlin and is near important esker woodlands. There is a very varied range of species of tree and shrub on the site and is also home to an established badger colony.

There are a number of significant tree stands in the County subject to Tree Preservation Orders and these are listed in Appendix 8.

Trees, Woodlands and Hedgerows Policy Objectives	
It is a policy objective of Westmeath County Council to:	
CPO 12.37	Preserve and enhance the amenity and biodiversity value of the County, by promoting the protection of trees, groups of trees and ancient woodlands, of significant amenity value, especially native and broadleaf species.
CPO 12.38	Protect trees subject to Tree Preservation Orders and seek to designate additional Tree Preservation Orders, where appropriate.
CPO 12.39	Discourage the felling of mature trees and hedgerow, particularly species rich roadside and townland boundary hedgerows to facilitate development and seek Tree Management Plans to ensure that trees are adequately protected during development and incorporated into the design of new developments.
CPO 12.40	Protect and preserve existing hedgerows in new developments, particularly species rich roadside and townland boundary hedgerows, and where their removal is necessary during the course of road works or other works seek their replacement with new hedgerows of native species indigenous to the area.
CPO 12.41	Support increases in tree cover (of suitable species) and native species hedgerows in all towns and villages across Westmeath due to air quality, shade, aesthetic and health benefits they provide.

CPO 12.42	Encourage the development of proposals for new woodlands and community woodlands in urban/urban fringe areas utilising funding available through schemes such as the NeighbourWood and Native Woodland Schemes.
CPO 12.43	Encourage the protection of the trees which are considered an important component of demesne landscapes.
CPO 12.44	Support the development of a plan for the protection and maintenance of public trees and public native hedgerows in urban areas.
CPO 12.45	Require, where necessary, a Tree Management Plan (with suitable native species) to be submitted as part of new development proposals. Ensure that, where possible, established trees are incorporated into the overall design of new developments and are fully protected during development works in accordance with BS standards.
CPO 12.46	Support the use of suitable marginal lands in Council ownership for community projects such as neighbourwood schemes and biodiversity projects.
CPO 12.47	Support the preparation of a Tree Planting Policy for the County which promotes biodiversity and indigenous tree planting.

12.15 Wetlands

A wetland is an area of land that is saturated with water either permanently or seasonally, and where the water table is near or at the surface. “Wetlands” may vary considerably in visual appearance, owing in part to the setting in which they occur and the vegetation type(s) present. There are special suites of plants adapted to cope with wet conditions and, as these wet conditions vary spatially, a mosaic of habitats comprising different plant communities may occur within a single wetland.

The ecological importance of wetland habitats has been recognised by the European Union, with several wetland types listed under Annex I of the EU Habitats Directive (CEC, 1992). These wetland habitats include “priority” habitats, such as lagoons, turloughs (in Ireland), active raised bogs and calcareous fens.

Increased drainage or flooding can cause significant change in habitat value and species diversity. The Water Framework Directive and Ramsar Convention provide for the protection and wise use of wetlands. The Council will work to manage, enhance and protect wetlands throughout the lifetime of this Plan through specific policy objectives.

The County Westmeath Wetland Survey (Smith 2019) documents the location, extent and condition of our wetlands, setting out recommendations for their preservation. Wetlands are important from a biodiversity perspective because they provide habitats for unusual communities of species that can survive in aquatic and semi-aquatic conditions. Wetlands also provide important ecosystem services such as flood prevention, provision of clean water, filtering pollutants and carbon storage. The tourism and recreation value of wetlands in Westmeath is also recognised in the study.

Wetlands Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.48	Resist development that would destroy, fragment or degrade any wetland in the County.
CPO 12.49	Support the implementation of recommendations made in the County Westmeath Wetlands Survey 2019 and subsequent versions thereof.
CPO 12.50	Require an Ecological Impact Assessment where it is proposed to fill or reclaim a wetland area.
CPO 12.51	Protect floodplains, wetlands and watercourses, for their biodiversity and flood protection value.
CPO 12.52	Ensure that all proposed land zonings take cognisance of appropriate riparian setback distances that support the attainment of high ecological status for water bodies, the conservation of biodiversity and good ecosystem health, and buffer zones from flood plains.
CPO 12.53	Implement the relevant parts of the Planning and Development (Amendment) (No. 2) Regulations 2011 and the European Communities (Amendment to Planning and Development) Regulations 2011, which require planning permission to be applied for where the area impacted by works relating to the drainage or reclamation of a wetland exceeds 0.1 hectares or where such works may have a significant effect on the environment. Such applications for permission would need to be supported by an Appropriate Assessment where necessary.

12.16 Waterways (lakes rivers/canals/streams)

Inland waterways, which include lakes, rivers, canals and streams, are living systems that are home to a wide variety of habitats and species. They function as ecological corridors that connect related habitats and designated sites which enable species to move from place to place. Waterways also contribute significantly to the character and amenity of the County and support tourism, recreation and quality of life for those living in and visiting the County.

Westmeath has a number of large lakes including Lough Ree, most of which are part of the River Shannon catchment which includes the Rivers Inny and Brosna. In addition, Lough Lene, a limestone lake is situated in the Upper Boyne catchment in the County. Many of the water resources have been afforded protection as National Heritage Areas, Special Areas of Conservation or Special Protection Areas. The Royal Canal passes through the county while the Kilbeggan branch of the Grand Canal exists as a dry bed.

Waterways Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.54	Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.
CPO 12.55	Provide for public access to waterways where feasible and appropriate, in partnership with the National Parks and Wildlife Service (NPWS), Waterways Ireland and other relevant stakeholders, whilst maintaining them free from inappropriate development, subject to Ecological Impact Assessment and Appropriate Assessment, as appropriate.
CPO 12.56	Protect the biodiversity of rivers, streams and other water courses and maintain them in an open state and discourage culverting and realignment.
CPO 12.57	Consult with Waterways Ireland and the National Parks and Wildlife Service, Government, Inland Waterways Association of Ireland and local communities on development proposals that may affect inland waterways, rivers, lakes, canals or water courses.
CPO 12.58	Ensure that the County's watercourses are retained for their biodiversity and flood protection values and to conserve and enhance where possible, the wildlife habitats of the County's rivers and riparian zones, lakes, canals and streams which occur outside of designated areas to provide a network of habitats and biodiversity corridors throughout the county.
CPO 12.59	Consult, as appropriate, with Inland Fisheries Ireland in relation to any development that could potentially impact on the aquatic ecosystems and associated riparian habitats.
CPO 12.60	Ensure that run off from a proposed development does not result in a deterioration of downstream watercourses or habitats.
CPO 12.61	Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones.
CPO 12.62	Have regard to the Inland Fisheries guidelines " <i>Planning for watercourses in the Urban Environment</i> " in relation to nature based surface water management.

CPO 12.63	Protect waterbodies and watercourses from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include the preservation habitat features/structure, such as treeline density, and protection buffers in riverine and wetland areas, as appropriate.
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12.17 Peatlands

Peatlands are a characteristic part of the landscape of County Westmeath covering about 17,000 ha or 9% of the County. The main peatland type associated with Westmeath is the Raised Bog, which are classified as rain fed, acidic and nutrient poor. This includes cutover, cutaway, raised bog and fen. Several of the more intact peatland sites are SACs. Peatlands also make up the majority of the Natural Heritage Areas in the County (see table 12.1). Of the peatlands in Westmeath, 24 consist of intact raised bog sites, 27 cutover raised bog sites, 24 cutaway raised bog sites and 69 fen sites (for more information refer to the Desktop survey of wetland sites in County Westmeath 2019, Blackthorn Ecology).

Peatlands are one of our oldest surviving ecosystems. They preserve a record of the historic environment and are considered amongst the most important ecosystems of the world, because of their key value for biodiversity, regulation of climate as a valuable natural carbon sink, water filtration and supply.

The importance of peatlands preservation was highlighted by the discovery of a significant archaeological Track/Togher at Mayne Bog near Coole Co. Westmeath in 2005. When recorded in 2006 the length of the Trackway was 657 metres but was seen to extend beyond both recorded limits (Whittaker in *Excavations 2006*). A radiocarbon (C14) date of 1200-820BC was obtained from the excavated structure (ibid), and therefore it is likely that the construction and operation of the trackway is dated to the Late Bronze Age.

The Council recognises the importance of peatlands as a major natural, archaeological and non-renewable resource in addition to recognising the important historical traditions and peat management skills associated with cutting turf for domestic use. In their natural state peatlands act as long-term sinks for atmospheric carbon dioxide. Peatlands are the most important long-term carbon store in the terrestrial biosphere. They sequester and store atmospheric carbon for thousands of years. Given the extent of intact and relatively intact raised bogs in Westmeath, considerable potential exists to use this valuable resource to mitigate against the impacts of climate change.

Peatlands Policy Objectives

It is a policy objective of Westmeath County Council to:

CPO 12.64	Protect the county's designated peatland areas and landscapes, including any ancient walkways through bogs and to conserve their ecological, archaeological, cultural, and educational heritage.
CPO 12.65	Require the preparation of Hydrological Reports for significant developments within and in close proximity to peatlands, and to take account of same in the assessment of impacts on the integrity of peatland ecosystems.
CPO 12.66	Exercise control of peat extraction, both individually and cumulatively, which would have significant impacts on the environment, in accordance with legislative provisions, in the interest of protecting and enhancing biodiversity and addressing climate change.
CPO 12.67	Work in partnership with relevant stakeholders on suitable peatland site(s) to demonstrate best practice in sustainable peatland conservation, management and restoration techniques and to promote their heritage and educational value subject to Ecological Impact Assessment and Appropriate Assessment, where relevant.
CPO 12.68	Work with relevant agencies such as Eastern and Midland Regional Assembly, Bord na Mona, NPWS, Coillte and adjacent Local Authorities to prepare an afteruse framework plan for the peatlands and related infrastructure, to provide for the future sustainable and environmentally sensitive use of large industrial peatlands sites when peat harvesting finishes. Such plans should have regard to both National and Regional frameworks concerning the future use of peatlands, including cutaway bogs.
CPO 12.69	Support collaboration between Local Authorities, the Bord na Mona Transition Team and relevant stakeholders in the development of partnership approaches to integrated peatland management for a just transition having regard to relevant policies and strategies such as the Bord na Móna Biodiversity Plan 2016-2021 and the national Climate Mitigation and Adaptation Plans. This shall include support for the rehabilitation and/or re-wetting of suitable peatland habitats.
CPO 12.70	Consider designating peatlands at Coolnagun, Corlanna, Lower Coole, Mayne, Ballinealoe and Clonsura as archaeological heritage areas, where it is considered ancient trackways or road may have been constructed.
CPO 12.71	Support the preparation of a Sustainable Holistic Management Plan for the future use of the Industrial Peatlands in the County, which recognises the role of peatlands in carbon sequestration.

